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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

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FEDERAL COMMUNICATIONS COMMISSION
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In the Matter of:

Petition for Rulemaking of the Cellular
Telecommunications Industry Association
Concerning Implementation of WRC-2000:
Review of Spectrum and Regulatory
Requirements for IMT-2000

RM-9920

REPLY COMMENTS OF WORLDCOM, INC.

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Dated: September 12, 2000

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SUMMARY

Pursuant to Section 1.405 of the Commission's Rules, WorldCom, Inc. ("WorldCom") hereby submits its Reply Comments regarding the Petition for Rulemaking filed by the Cellular Telecommunications Industry Association ("CTIA") in the above-captioned proceeding. In its Petition, CTIA requests that the Commission consider designating additional spectrum for third generation ("3G") wireless services, including the frequency bands that were identified at WRC-2000 for IMT-2000 services, such as the 2.5 – 2.7 GHz ("MMDS/ITFS") band.

WorldCom and other commenters, including numerous MMDS/ITFS licensees and manufacturers, have expressed serious concerns with regard to potential use of the 2.5 – 2.7 GHz band for 3G services. The Petition raises more questions than it answers and makes a variety of unjustified assumptions. Accordingly, numerous commenters agree that before the Commission can even propose designating any additional spectrum for 3G services, it must address many of the assumptions and questions raised by the Petition.

First, the Commission must address whether there is a real need in the United States for additional spectrum for 3G services. WorldCom and others note that the Commission has not been clearly presented with specifics as to *how* much, if any, additional spectrum will be needed in the United States for 3G services, *why* the current mobile allocations in the United States are insufficient to meet this expected demand, and *what* the projected demand for 3G services in the United States will be in the near future.

Second, to the extent that additional spectrum is determined to be needed for 3G services in the United States, the Commission needs to consider whether existing mobile services spectrum and/or other spectrum recently identified by the Commission for advanced mobile services can satisfy this need in the short term and/or long term. Careful consideration must be

given to a variety of 3G spectrum alternatives beyond those additional IMT-2000 bands identified at WRC-2000, especially since any designation or use of the 2.5 – 2.7 GHz band for mobile services in the United States would come at the expense of displacing MMDS/ITFS licensees.

Third, the Commission must consider whether global harmonization of spectrum is really necessary for the successful implementation of 3G services in the United States. While CTIA's Petition assumes, without any concrete evidence, that such harmonization is necessary for the success of 3G services in the United States, many commenters have questioned this assumption. Spectrum harmonization is not driving the 3G market worldwide, and accordingly, it should not drive the Commission's allocation decisions for 3G services.

In fact, regulators around the world are highly unlikely to achieve global spectrum harmonization for 3G. In the long run, harmonization will not be possible because most North and South American countries plan to use the 1.7 GHz band for 3G services, while many European countries have indicated that they plan to use the 2.5 GHz band for 3G services. In the short-to-mid term, harmonization will not be possible because existing European and U.S. mobile spectrum allocations are inconsistent. The original international identification of 230 MHz of spectrum for IMT-2000 services at WARC-92 encompassed the 1885-2025 MHz and 2110-2200 MHz bands. While Japan and most of Europe have begun to license 3G services in much of this spectrum, the United States, Canada and several other countries have already licensed Personal Communications Services ("PCS") or 2G services in most of the bottom portion of these bands.

Commenters have also questioned whether harmonization is necessary for the success of 3G services. The prevalence of small, lightweight multi-band mobile phones and the

possible emergence of other new technologies (*i.e.*, software radios) eliminates the need for harmonized spectrum throughout the world. In addition, it is questionable whether the market for global roaming is large enough to warrant harmonization of spectrum in the U.S. with allocations elsewhere. Further, harmonization is not necessary to the success of 3G in the U.S. because the U.S. market is more than large enough to sustain research and development and timely deployment of 3G services.

Fourth, the Commission must consider whether it is more appropriate to issue an NOI, as opposed to an NPRM, in response to CTIA's Petition. With all of the issues that must be addressed and technical studies that must be completed before any new rules or allocations can even be proposed, many commenters agree that it is premature for the Commission to propose rules or any specific spectrum allocations in response to the CTIA Petition.

Finally, no matter what the Commission decides with regard to the Petition, it must protect incumbent MMDS/ITFS licensees in the 2.5 – 2.7 GHz band. A reallocation of the 2.5 – 2.7 GHz band for 3G services would seriously disrupt the instructional television services currently being provided in the band – services which have been provided, in some cases, for over 30 years with immeasurable public interest and educational benefits. Moreover, a reallocation of the 2.5 – 2.7 GHz band would displace the tremendous investments that service providers and equipment manufacturers have made, and continue to make, to deploy two-way fixed broadband wireless services to millions of Americans, particularly in underserved and unserved markets. At the threshold of bringing these innovative services to consumers, the Commission must not allocate new services that would interfere with or displace incumbent usage of the MMDS/ITFS spectrum.

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REPLY COMMENTS OF WORLDCOM, INC.

Pursuant to Section 1.405 of the Commission's Rules,¹ WorldCom, Inc.

("WorldCom") hereby submits its Reply Comments regarding the Petition for Rulemaking filed by the Cellular Telecommunications Industry Association ("CTIA") in the above-captioned proceeding.²

In its Petition, CTIA requests that the Commission consider designating additional spectrum for third generation ("3G") wireless services, including the frequency bands that were identified at WRC-2000 for IMT-2000 services, such as the 2.5 – 2.7 GHz ("MMDS/ITFS") band. WorldCom and other commenters, including numerous MMDS/ITFS licensees and manufacturers, have expressed serious concerns with regard to this aspect of the

¹ 47 C.F.R. § 1.405 (1999).

² *Petition for Rule Making of the Cellular Telecommunications Industry Association Concerning Implementation of WRC-2000: Review of Spectrum and Regulatory Requirements for IMT-2000*, Petition for Rulemaking, filed July 12, 2000 ("Petition").

Petition.³ With combined investments exceeding several billions of dollars, companies like WorldCom, Sprint and Nucentrix are on the verge of delivering advanced fixed broadband wireless services to consumers throughout the United States, including those in underserved and unserved markets. Indeed, the Commission recently completed the first filing window (August 14-18, 2000) for applications to provide two-way broadband services in the 2.5 – 2.7 GHz band – a filing window in which applications for markets throughout the United States were filed by WorldCom, Sprint, Nucentrix and other MMDS/ITFS licensees. The Commission must not jeopardize the rollout of these competitive, facilities-based “last mile” services by authorizing incompatible 3G services in the MMDS/ITFS band.

The CTIA Petition raises more questions than it answers and makes a variety of unjustified assumptions. Indeed, numerous commenters agree that before the Commission can even propose designating any additional spectrum for 3G services, it must address many of the

³ See, e.g., WorldCom Comments at 11; Archdiocese of New York Comments at 4 (“[I]t is important that the Commission not overlook existing services fulfilling important social objectives – in particular the improved educational opportunities which represent a goal of overarching national importance for both Congress and the Administration.”); Digital Broadcasting Corporation Comments at 1-2; National ITFS Association Comments at 4 (“NIA believes that, when all is said and done, the Commission's study of all factors related to spectrum needs and options for 3G will lead it to recognize that the 2500 – 2690 MHz band should and must be preserved for incumbent ITFS and MMDS licensees for their existing and developing services.”); Nucentrix Broadband Networks, Inc. Comments at 9-16; Sprint Corporation Comments at 10; NITV Comments at 3; Wireless One Comments at 2; Arizona State University et. al Comments at 4-6; The Wireless Communications Association International, Inc. Comments at 3; IP Wireless, Inc. Comments at 5; Cisco Systems, Inc. Comments at 1 (“[T]he Commission should take care not to advance next generation mobile services by undercutting the next-generation fixed wireless services that have just begun to realize their potential.”).

assumptions and questions raised by the Petition.⁴ The only appropriate mechanism for doing so is to issue a Notice of Inquiry ("NOI") in lieu of initiating a rulemaking proceeding.⁵

I. THE COMMISSION MUST ADDRESS MANY QUESTIONS BEFORE IT CAN PROPOSE ANY NEW RULES OR ALLOCATIONS FOR 3G SERVICES

In its initial Comments, WorldCom and many other parties identified many significant issues and questions that the Commission needs to address before it could make any specific proposals for new rules and allocations.⁶ Among the questions and issues raised by these commenters are:

- Is there a real need in the United States for additional spectrum for 3G services?

⁴ See, e.g., WorldCom Comments at 3; WCA Comments at 3 ("CTIA correctly observes that the technical and legal issues posed by IMT-2000 are both substantial and complex, and require thorough study and analysis both by the Commission and private industry before a spectrum allocation plan for IMT-2000 can be put into effect."); Sprint Comments at 14 ("Sprint thus challenges the assumptions made by CTIA on the need for additional spectrum or spectral harmonization for implementation of IMT-2000, but encourages the Commission to consider these issues and others as well as the results of various ongoing and planned tests described above prior to any spectrum allocation.").

⁵ Some of CTIA's supporters also recommend such an approach. See, e.g., Motorola Comments at 9 ("At this time, Motorola believes that formal rulemaking proceedings are premature. Rather, the FCC should develop a structured working arrangement with the NTIA and develop a process for reviewing the availability of spectrum bands identified by WRC-2000 to see whether and how these bands, or a portion of these bands, can be made available for IMT-2000 services. The process must include all interested parties, including industry and the Department of Defense, to fully assess options for either sharing with or relocating existing users."). While not directly supporting an NOI, Nokia acknowledges the significant effort the Commission must undertake before it will be in a position to allocate additional spectrum for 3G services. See Nokia Comments at 5 ("Nokia shares the concerns stated in the CTIA petition that premature auction of relevant bands before a detailed analysis is complete would be detrimental to U.S. consumers, manufacturers, and service providers.").

⁶ WorldCom Comments at 3.

Beyond the very general statements of CTIA and its supporters,⁷ WorldCom and others note that the Commission has not been clearly presented with specifics as to *how* much, if any, additional spectrum will be needed in the United States for 3G services, *why* the current mobile allocations in the United States are insufficient to meet this expected demand, and *what* the projected demand for 3G services in the United States will be in the near future.⁸ In this regard, WorldCom agrees with the comments of the WCA which list the following specific issues:

⁷ CTIA's Petition and the comments supporting it are replete with assumptions concerning the need for additional 3G spectrum without any concrete evidence to support these claims as they relate to demand projections in the United States. *See* CTIA Petition at 2 (discussing how the success of 1G and 2G systems "foreshadows the potential" for 3G systems). *See also* Verizon Wireless at 3 ("current spectrum allocations in the United States are simply not sufficient to support the continued growth of mobile voice and low-speed data services, let alone the emergence of extremely spectrum intensive high-speed 3G applications"); Nokia Comments at 2 ("[T]he need for additional spectrum for 3G, above and beyond current and planned future allocations, is driven by the continued increase in demand for existing mobile services and projected demand for high bit rate services envisioned for 3G"); Lucent Technologies Comments at 1 ("American consumers, however, will not fully benefit from the development of 3G services, unless sufficient and suitable spectrum is allocated to Commercial Mobile Radio Service . . . for use with more advanced mobile communications applications, including IMT-2000."); CDMA Development Group at 2 ("the international community has recognized the need for additional spectrum for IMT-2000 in the near future").

⁸ *See* WorldCom Comments at 3-4. *See also* Sprint Comments at 13 ("The CTIA Petition fails to establish . . . that the existing spectrum allocations are insufficient . . . "); Nucentrix Comments at 5 ("[A]t this early stage in development, it is difficult to know exactly what 3G services will look like, let alone what spectrum requirements these services might have"); NITV Comments at 3 ("Any study should consider spectrum already assigned for 3G and the need for additional frequencies"); Arizona State University et al. Comments at 4 ("The Commenters urge the FCC to conduct such a study, as well as a study to determine how much additional spectrum is in fact required for '3G' services."); National ITFS Association Comments at 3 ("[T]he scope of the inquiry should include all issues relevant to the selection of spectrum and making it available, in addition to the issues raised by CTIA. These issues would include the nature and amount of the actual need for 3G spectrum in the United States, whether that need can be addressed by using bands other than those being used in other countries. . . , and the prospects of using bands already previously identified by the ITU for 3G use.").

What is the projected demand for IMT-2000 in the United States, *and what is the basis for those projections?* To what extent does demand for IMT-2000 depend on factors such as market size, demographics and geographic location? Will demand for IMT-2000 be immediate, or will it mature over an extended period of time as IMT-2000 services are introduced to the public? To what extent will the projected demand for IMT-2000 be addressed by other terrestrial broadband technologies (*e.g.*, fixed wireless, cable modem, DSL, satellite)?⁹

In the absence of such specific information, the Commission cannot possibly be in a position to determine how much (if any) additional spectrum might be needed, let alone candidate frequency bands, for 3G services. As acknowledged in Resolution [COM 5/24] at WRC-2000, "due to differing requirements, not all administrations may need all of the IMT-2000 bands identified at this conference, or, due to the usage by and investment in existing services, may not be able to implement IMT-2000 in all of those bands."¹⁰

- To the extent that additional spectrum is determined to be needed for 3G services in the United States, can the existing Mobile Services spectrum and/or other spectrum recently identified by the Commission for advanced mobile services satisfy this need in the short term and/or long term?

Numerous commenters have also questioned whether the Commission should allocate more Mobile Service spectrum for 3G services in light of: (1) the flexibility established at WRC-2000 for individual administrations to designate a variety of different frequency bands for 3G services including several bands already being used for Mobile Services; (2) the apparent ability of operators to migrate or evolve their customer bases from 1G and/or 2G services to 3G services; and (3) the additional spectrum that has already been identified by the Commission for

⁹ See WCA Comments at 13 (emphasis in original).

¹⁰ Resolution [COM5/24].

possible use for 3G services including the 1710-1755 MHz and 2110-2150 MHz bands.¹¹ In this regard, WorldCom agrees with the comments of Nucentrix:

[T]he FCC should question whether the bands recommended by WRC-2000 are necessary for 3G development, or whether the allocations proposed in its 1999 Policy Statement would provide adequate spectrum. In the 1999 Policy Statement, the Commission identified 187 MHz in 13 frequency bands as 'well suited' for new mobile services, in addition to 15 MHz that the NTIA noted could be used for this purpose. This spectrum is well in excess of the 160 MHz that the WRC identified as being adequate to serve 3G wireless needs in the highest traffic areas through 2010.¹²

CTIA appears to assume that the Commission should only consider the bands identified at WRC-2000 in assessing what, if any, additional spectrum should be allocated for 3G services. But the Commission must take a step back, and give careful consideration to a variety of 3G spectrum alternatives.¹³ This is particularly important because any designation or use of the 2.5 – 2.7 GHz band for mobile services in the United States would come at the expense of MMDS/ITFS licensees that are currently delivering (and will soon be delivering even more) advanced fixed broadband services that the Commission has recognized as being extremely

¹¹ See WorldCom Comments at 5-7. See also Sprint Comments at 14 ("Can allocation of new spectrum recently made available or soon to be made available as part of the Commission's Spectrum Policy Statement accommodate the needs of IMT-2000?"); Arizona State University et al. Comments at 4 ("The Commission has recently identified approximately 200 MHz of spectrum for reallocation over the next three to five years.").

¹² See Nucentrix Comments at 7-8.

¹³ The supporters of the CTIA Petition also recognize that a variety of spectrum alternatives must be considered by the Commission. See e.g., Nokia Comments at 4 ("It is crucial that the Commission move forward in making spectrum available for 3G services. However, in order to meet the goals of identifying additional spectrum that is globally common to the greatest extent possible, it is crucial that the Commission examine all relevant bands as part of a comprehensive study that looks at the implications of and impediments to designating spectrum for 3G.").

valuable.¹⁴ As recently as last Friday, Qualcomm's Chairman and Chief Executive Officer testified during a Congressional policy briefing that he did not think that 3G services needed to be confined to certain bands identified by the WRC. He believes that spectrum simply needs to be used better.¹⁵ For example, if nearly half of today's mobile subscribers in the United States are using spectrally-inefficient analog phones, will their transition to digital phones substantially relieve the need for more spectrum?¹⁶

- Is global harmonization of spectrum really necessary for implementing 3G services in the United States?

CTIA and several of its members have argued that it is critically important for the Commission to allocate additional spectrum for 3G services that is harmonized with the

¹⁴ See *In the Matter of Amendment of Parts 21 and 74 to Enable Multipoint Distribution Service and Instructional Television Fixed Service Licensees to Engage in Fixed Two-Way Transmissions*, 13 FCC Rcd. 19112, 19115 (1998) ("*Two-Way Report and Order*") ("[A]mending our Rules to enhance the ability of MDS and ITFS licensees to provide two-way service will benefit commercial operators, educational institutions and the public. As we stated in the NPRM, our goals in instituting this proceeding were to facilitate the most efficient use of the affected spectrum, to enhance the competitiveness of the wireless cable industry, and to provide benefits to the educational community through the use of two-way services, such as high-speed Internet service. We believe the Rules we adopt today will facilitate the realization of these goals, while still permitting traditional use of the spectrum, and will give both MDS and ITFS licensees the flexibility they need to best serve the public interest.").

¹⁵ "Voicestream CEO Stanton Criticizes Spectrum Policies," TR Daily at 4-5 (Sept. 8, 2000).

¹⁶ See *In the Matter of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services*, Fifth Report, FCC 00-289 (rel. Aug. 18, 2000) ("CMRS Competition Report") at 13-14 (noting that digital subscribers in the mobile telephone sector made up only 51 percent of the industry total, and that large cellular carriers such as Bell Atlantic reported that as of the end of 1999, only 40 percent of their subscribers used digital services).

allocations being made in the rest of the world.¹⁷ They assert, without any hard evidence, that global harmonization is essential if the United States is not to be left behind in the “race” for 3G service superiority. They also state, again without any facts to support their case, that such harmonization will lead to manufacturing efficiencies and economies that will enable U.S. manufacturers to better compete with suppliers in other parts of the world.

WorldCom and many other commenters have questioned the assumption that worldwide harmonization of 3G spectrum is essential to the success of 3G in the U.S.¹⁸ As WorldCom indicated in its comments, spectrum harmonization is not driving the 3G market worldwide,¹⁹ and accordingly, it should not drive the Commission's allocation decisions for 3G services. Before the Commission considers any action that would displace incumbent licensees in the 2.5 – 2.7 GHz band, and thereby jeopardize the significant investment that these licensees have already made, and continue to make, to deploy advanced broadband fixed wireless services

¹⁷ See e.g., AT&T Wireless Comments at 4 (“[T]he benefits of harmonization are numerous.”); Lucent Technologies Comments at 2 (“Lucent agrees that the Commission should, to the extent possible, harmonize US allocations with other IMT-2000 allocations around the world.”); CDMA Development Group Comments at 3 (“[I]t is critical that spectrum decisions in the United States be aligned as much as possible with decisions that will result from WRC-2000.”); Universal Wireless Communications Consortium Comments at 6; Qualcomm Incorporated Comments at 2; Motorola Comments at 6.

¹⁸ WorldCom Comments at 7; Nucentrix Comments at 6; Sprint Comments at 10-14; WCA Comments at 12 (“[T]he Commission should be highly skeptical of any contention that the putative benefits of global harmonization for IMT-2000 outweigh the public interest benefits of preserving competitive fixed wireless broadband service in the 2.5 GHz band.”). Even Verizon Wireless, a supporter of CTIA, questions the absolute need for harmonization. Verizon Wireless Comments at 6 (“A failure to make sufficient spectrum available to meet demand in the United States in the interest of attempting to harmonize spectrum with the rest of the world would severely handicap U.S. operators and harm U.S. consumers.”).

¹⁹ See WorldCom Comments at 7-11.

to underserved and unserved Americans, it must fully analyze whether harmonization is really critical to the success of 3G services.

In fact, regulators around the world are highly unlikely to achieve global spectrum harmonization for 3G. In the long run, harmonization will not be possible because most North and South American countries plan to use the 1.7 GHz band for 3G services, while many European countries have indicated that they plan to use the 2.5 GHz band for 3G services. In the short-to-mid term, harmonization will not be possible because existing European and U.S. mobile spectrum allocations are inconsistent. As the Commission is well aware, the original international identification of 230 MHz of spectrum for IMT-2000 services at WARC-92 encompassed the 1885-2025 MHz and 2110-2200 MHz bands.²⁰ While Japan and most of Europe have begun to license 3G services in much of this spectrum, the United States, Canada and several other countries have already licensed Personal Communications Services ("PCS") or 2G services in most of the bottom portion of these bands.²¹

It is highly questionable whether harmonization is necessary for the success of 3G services. The need for global spectrum harmonization was challenged by WorldCom and many other commenters for at least three reasons. **First**, the prevalence of small, lightweight multi-band mobile phones and the possible emergence of other new technologies (*i.e.*, software radios)

²⁰ Depending on the region of the world, approximately 60-70 MHz of this spectrum has been allocated for Mobile-Satellite Services, in the 1980-2010 MHz and 2170-2200 MHz bands or the 1990-2025 MHz and 2165-2200 MHz bands.

²¹ See WorldCom Comments at 8-9; Sprint Comments at 12 ("[C]ontrary to CTIA's portrayal of WRC-2000 as having resulted in a universal play for harmonized spectrum, neither the concept of spectral harmonization nor the particular spectrum identified for potential harmonization were universally adopted").

which are able to switch between frequency bands seamlessly as users roam between continents and national borders eliminates the need for harmonized spectrum throughout the world.²² Accordingly, with these technologies, the concerns of companies, like AT&T Wireless, that "subscribers would be forced to carry multiple wireless phones" are misplaced.²³ **Second**, it is questionable whether the market for global roaming is large enough to warrant harmonization of spectrum in the U.S. with allocations elsewhere.²⁴ **Third**, harmonization is not necessary to the success of 3G in the U.S. because the U.S. market is more than large enough to sustain research and development and timely deployment of 3G services. Indeed, it is inconceivable that manufacturers of wireless equipment and wireless service providers would ignore a large subscriber base (224 million according to AT&T) and profitable market in the U.S. for 3G services even without harmonization.²⁵

- Whether it is more appropriate to issue an NOI, as opposed to an NPRM, in response to CTIA's Petition?

²² See e.g., Sprint Comments at 12 ("Using multi-band handsets to meet global roaming needs enables the U.S. and its neighboring North American countries to continue providing critical and immediately useful services such as MMDS/ITFS services and opens the possibility of utilizing the full range of available spectrum."); Nucentrix Comments at 6 ("Currently, many U.S. mobile wireless providers offer equipment with multi-mode, multi-band capability. . . . This technology may entirely obviate the need for a single, uniform international allocation."); WCA Comments at 12 ("[I]t is inevitable that manufacturers will have to accommodate IMT-2000 in multiple bands, and that multiband handsets will be necessary to facilitate global roaming.").

²³ AT&T Wireless Comments at 4.

²⁴ WorldCom Comments at 10.

²⁵ AT&T Wireless Comments at 4.

WorldCom and numerous other commenters have questioned whether an NPRM is an appropriate vehicle for responding to CTIA's Petition. With all of the issues that must be addressed and the technical studies that must be completed before any new rules or allocations can even be proposed, many commenters agree that it is premature for the Commission to propose rules or any specific spectrum allocations in response to the CTIA Petition.²⁶ Indeed, even a prominent supporter of the Petition "believes that formal rulemaking proceedings are premature."²⁷ Only after a full record is developed on all of these questions will the Commission be in a position to determine whether to allocate additional spectrum for 3G services, and if so, which spectrum should be proposed for this purpose.

II. ANY ALLOCATION OF SPECTRUM FOR 3G SERVICES MUST PROTECT INCUMBENT MMDS/ITFS LICENSEES IN THE 2.5 – 2.7 GHZ BAND

Having recently invested over \$1 billion for the rights to use spectrum in the 2.5 - 2.7 GHz band and filed applications to use this spectrum in more than 60 markets throughout the United States in order to provide advanced fixed wireless broadband services, WorldCom expressed significant concerns regarding CTIA's request to consider additional spectrum for 3G

²⁶ See WorldCom Comments at 15; IP Wireless Comments at 2; Nucentrix Comments at 1; Wireless One Comments at 2; Arizona State University et al. Comments at 3; NITV Comments at 3; National ITFS Association Comments at 4 ("[I]t is premature to begin a rulemaking proceeding rather than an inquiry, and it is important that the study address all issues relevant to selecting spectrum and making it available."); Instructional Telecommunications Foundation Comments at 9 ("While the CTIA Petition. . . raises significant issues, it proposes no new rules, amended rules, or repealed rules, and thus cannot trigger a rulemaking proceeding."); IP Wireless, Inc. Comments at 5.

²⁷ Motorola Comments at 9.

services in the MMDS/ITFS band.²⁸ These concerns were echoed by many other commenters, including both ITFS and other MMDS licensees as well as MMDS equipment manufacturers.

Indeed, there is widespread concern that a reallocation of the 2.5 – 2.7 GHz band for 3G services would seriously disrupt the instructional television services currently being provided in the band – services which have been provided, in some cases, for over 30 years with immeasurable public interest and educational benefits.²⁹ In addition, like WorldCom, other commenters expressed concern that a reallocation of the 2.5 – 2.7 GHz band would displace the tremendous investment that service providers and equipment manufacturers have already made, and continue to make, to deploy two-way fixed broadband wireless services to millions of Americans, particularly in underserved and unserved markets – investments that the Commission encouraged by adopting its two-way fixed service rules just two years ago.³⁰

²⁸ See WorldCom Comments at 11.

²⁹ See Archdiocese of New York Comments at 4 ("Many years ago, the Commission articulated the promises and opportunities of ITFS. The Archdiocese has fulfilled those promises and opportunities. It has used its ITFS spectrum well. Any effort to provide spectrum for new and emerging technologies should take into account the educational benefits provided by the Archdiocesan system and others like it around the country."); Instructional Telecommunications Foundation Comments at 9-10; NITV Comments at 3 ("ITFS Licensees are now building new infrastructures and NITV respectfully requests the Commission to allow this progress to continue for the benefit of education and to help bridge the digital divide in rural and inner city areas."); National ITFS Association at 4 ("NIA believes that, when all is said and done, the Commission's study of all factors related to spectrum needs and options for 3G will lead it to recognize that the 2500 – 2690 MHz band should and must be preserved for incumbent ITFS and MMDS licensees for their existing and developing services. The 2.5 GHz band is not only ubiquitously used for one-way educational video services developed over the past 35 years across the United States, including distance education and adult learning services critical to the country's future, it is also now experiencing the rollout of two-way broadband data services, for both educational and commercial purposes, to homes and businesses."); Arizona State University et al. Comments at 5 ("The reservation of spectrum for ITFS is unique and merits preservation.").

³⁰ See Nucentrix Comments at 3 ("The interests of the incumbents on [sic] this band should be at the forefront of the Commission's considerations as it evaluates questions regarding
(Continued ...)

At the threshold of bringing these innovative services to consumers, the Commission must not allocate new services that would interfere with or displace incumbent usage of the MMDS/ITFS spectrum.

III. CONCLUSION

In sum, in any proceeding initiated in response to the CTIA Petition, the Commission must ensure that the scope of its inquiry is broad enough to include, at a minimum, the issues set forth above. While CTIA acknowledges that studies and analysis need to be conducted by the Commission before any additional 3G spectrum designation is made, the Commission must also consider whether such a designation is even needed, as well as the full-range of spectrum bands that the Commission has already allocated for mobile services. WRC-2000 provides each administration with substantial flexibility in designating 3G spectrum and the Commission should not feel constrained by the concept of global harmonization when making any 3G spectrum designations.

The Commission must avoid taking any action that would displace or disrupt incumbent MMDS/ITFS licensees, like WorldCom, that have invested, and continue to invest, billions of dollars to deploy advanced fixed wireless broadband services to millions of unserved and underserved American consumers.

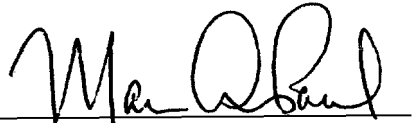
3G, particularly any allocations to support the development of 3G services."); Wireless One Comments at 3 ("To deprive wireless broadband operators of this spectrum now would be fundamentally unfair to the companies who have so heavily invested in the spectrum over the last five years."); WCA Comments at 7; Sprint Comments at 3; National ITFS Association Comments at 4 ("These two-way wireless services are an important component of the "last mile" broadband delivery solution in the United States. . . ."); IP Wireless, Inc. Comments at 4 ("IPW is one of the companies that have [sic] invested substantial sums in the development of wireless broadband technologies and services.").

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Dated: September 12, 2000

CERTIFICATE OF SERVICE

I hereby certify that on this 12th day of September, 2000 a true and correct copy of the foregoing Reply Comments of WorldCom, Inc. was sent via first class mail, postage prepaid, to the following:

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